

REMARKS

Claims 1-16, 18-34 and 36-40 are pending in the present application. Claims 9-12, 16, 18, 27-30, 34, 36 and 40 have been amended, and Claims 17 and 35 has been cancelled, herewith. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 112, Second Paragraph

The Examiner rejected Claims 9-12, 16-17, 27-30 and 34-35 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. This rejection is respectfully traversed.

Applicants have removed all references to Java from the claims, as required by the Examiner.

Therefore the rejection of Claims 9-12, 16-17, 27-30 and 34-35 under 35 U.S.C. § 112, second paragraph has been overcome.

II. 35 U.S.C. § 103, Obviousness

A. The Examiner rejected Claims 1-5, 7, 9-14, 16-17, 20-24, 26-32, 34-35 and 38-39 under 35 U.S.C. § 103 as being unpatentable over Endicott et al. (U.S. 6,047,295) hereinafter referred to as Endicott in view of Howes et al. (U.S. 6,366,558 B1) hereinafter referred to as Howes and de la Salle (U.S. 5,878,420). This rejection is respectfully traversed.

With respect to Claim 1, it is urged that none of the cited references teach or suggest the claimed feature of "responsive to conclusion of a predetermined time period measured by the timer, maintaining a weak reference to the connection object". In rejecting Claim 1, the Examiner acknowledges that Endicott does not teach this claimed feature¹. To account for this missing claimed feature, the Examiner alleges that Howes discloses "The timer field is used to time out a connection object when no activity occurs on the connection for a specified period of time (lines 10-12 of column 14)". Applicants urge that this allegation does not establish a teaching or suggestion of the claimed step of *maintaining a weak reference to the connection*

¹ On page 4 of the present Office Action dated 09/08/2005, in paragraph 8(a), the Examiner states "Endicott does not explicitly teach: starting a timer responsive to conclusion of a communication process using the connection; and responsive to conclusion of a predetermined time period measured by the timer, maintaining a weak reference to the connection object".

object (responsive to conclusion of a predetermined time period measured by the timer). Rather, Howes connection object is "timed out" when no activity occurs for a specified period of time - which is substantially different from maintaining a weak reference to the connection object responsive to conclusion of a predetermined time period. Thus, the Examiner has failed to establish a *prima facie* showing of obviousness with respect to Claim 1². Accordingly, the burden has not shifted to Applicant to rebut such improper obviousness assertion³, and Claim 1 has been erroneously rejected due to such failure to properly establish a *prima facie* showing of obviousness⁴.

This missing claimed feature is also evidenced by Howes' teaching at col. 14, lines 12-23, where Howes describes that when the standby Local Director is in an inactive state (since the active Local Director has not failed and thus this active Local Director is managing the data flow), it does not handle packets and thus its timers are not updated when connection activity occurs. When this standby Local Director becomes active (due to a failure of the active Local Director), the standby Local Director's timer field is updated to the current time such that the connection objects which the standby Local Director is now managing do not time out prematurely. These connection objects then time-out under the same circumstances as when the active Local Director is managing the connection (col. 14, lines 18-23). Importantly, the timer field is used to *time out a connection object* when no activity occurs on the connection for a specified period of time (Col. 14, lines 11-13). *Such a time out causes the object to be deleted* (col. 9, lines 22-29). It is thus urged that none of the cited references teach or otherwise suggest the claimed feature of "*responsive to conclusion of a predetermined time period measured by the timer, maintaining a weak reference to the connection object*" as expressly recited in Claim 1.

With respect to Claims 2-5, 7 and 9-12, Applicants initially traverse for reasons given above with respect to Claim 1 (of which Claims 2-5, 7 and 9-12 depend upon).

² To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. *See also, In re Royka*, 490 F.2d 580 (C.C.P.A. 1974).

³ In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.*

⁴ If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Further with respect to Claim 2, it is urged that none of the cited references teach or suggest the claimed feature of "determining whether a normal reference to the connection object exists; and reusing the connection if the normal reference exists". In rejecting Claim 2, the Examiner cites Endicott's teaching at col. 10, lines 35-47 as teaching the claimed step of reusing the connection if the normal reference exists. It should initially be noted that the Examiner cited Endicott's teaching at Col. 5, lines 33-37 as teaching the claimed 'connection'. The passage cited at col. 10, lines 35-47 – which is alleged to teach reusing the connection if the normal reference exists – does not describe any type of operation with respect to such 'connection'. Rather, this cited passage states:

"Once the lock is obtained, synchronization is ensured, and thus, the referenced object for the weak reference may be updated in block 94 in the same manner as in block 91. Then, in block 96, the cycle count for the weak reference is set to the cycle count for the current collection cycle to indicate that the referenced object has been made strongly-reachable as a result of this operation. As a result, any further accesses to this weak reference during the current collection cycle will no longer require use of the locking mechanism since the referenced object is ensured of not being collected during the current collection cycle. Next, upon completion of block 96, the reference lock is released in block 98, whereby routine 88 is then complete."

As can be seen, this passage describes a way to ensure synchronization during a (garbage) collection cycle using a lock. It has nothing to do with any type of 'connection' and thus does not teach or otherwise suggest the claimed step of "*reusing the connection* if the normal reference exists". Thus, a *prima facie* case of obviousness has not been established with respect to Claim 2, and therefore the burden has not shifted to Applicants to rebut this obviousness assertion.

Further with respect to Claim 4, it is urged that none of the cited references teach or otherwise suggest the claimed feature of "determining whether a weak reference to the connection object exists". In rejecting this aspect of Claim 4, the Examiner cites Endicott's teaching at col. 2, lines 30-39; col. 7, lines 43-47; and col. 10, line 48 – col. 11, line 2 as teaching

this claimed step. Applicants urge that on page 5 of the present Office Action (dated 09/08/2005), the Examiner expressly acknowledges that the cited Endicott reference does *not* teach a connection object, and it is therefore urged that since Endicott does not teach a connection object, it necessarily follows that Endicott does not teach any type of determining step with respect to such missing connection object. Thus, Endicott does not teach the specific determining step of "determining whether a weak reference to the *connection object* exists". Therefore, a proper *prima facie* case of obviousness has not been established with respect to Claim 4, and accordingly the burden has not shifted to Applicants to rebut such obviousness assertion.

Still further with respect to Claim 4, none of the cited references teach or suggest the claimed feature of determining whether the connection object has been destroyed if the weak reference (to the connection object) exists. In rejecting this aspect of Claim 4, the Examiner cites Endicott's teaching at col. 7, lines 47-52 and col. 14, lines 44-47 as teaching this claimed step. For similar reasons to those given above with respect to the first step of Claim 4, since Endicott does not teach any type of connection object, it does not teach any actions associated with such (missing) connection object, and thus does not teach the specific claimed step of determining whether the *connection object* has been destroyed if the weak reference (to the *connection object*) exists. Therefore, a proper *prima facie* case of obviousness has not been established with respect to Claim 4, and accordingly the burden has not shifted to Applicants to rebut such obviousness assertion.

Further with respect to Claim 7, it is urged that none of the cited references teach or suggest the claimed feature of "sending notification to the server that the *connection object* is unreferenced when a weak reference to the *connection object* is maintained" (emphasis added by Applicant). In rejecting Claim 7, the Examiner cites Endicott's teaching at col. 6, line 66 – col. 7, line 15 as teaching this claimed step. Applicants urge that because Endicott does not teach connection objects, it necessarily follows that it does not teach any actions associated with such (missing) connection objects. Therefore, a proper *prima facie* case of obviousness has not been established with respect to Claim 7, and accordingly the burden has not shifted to Applicants to rebut such obviousness assertion.

Still further with respect to Claim 7, the passage cited by the Examiner in rejecting such claim does not describe any step of *sending* anything to a server, such as a notification (as claimed), or otherwise. Thus, Claim 7 is further shown to not be obvious in view of the cited references, as there are additional claimed steps not taught or suggested by the cited references.

With respect to Claim 13 (and dependent Claims 14, 16 and 17), Applicants traverse for similar reasons to those given above with respect to Claim 4.

Applicants traverse the rejection of Claims 20-24, 26-30 and 38 for similar reasons to those given above with respect to Claims 1-5, 7 and 9-12.

Applicants traverse the rejection of Claims 31 (and dependent Claims 32, 34 and 35) and 39 for similar reasons to those given above with respect to Claims 4 and 13.

Therefore, the rejection of Claims 1-5, 7, 9-14, 16-17, 20-24, 26-32, 34-35 and 38-39 under 35 U.S.C. § 103 has been overcome.

B. The Examiner rejected Claims 6, 15, 25 and 33 under 35 U.S.C. § 103 as being unpatentable over Endicott, Howes, and de la Salle as applied to claims 4 and 23 respectively above in view of Official Notice. This rejection is respectfully traversed.

With respect to Claim 6 (and similarly for Claim 25), Applicants traverse such rejection for reasons given above with respect to Claim 1 (of which Claim 6 depends upon).

With respect to Claim 15 (and similarly for Claim 33), Applicants traverse such rejection for reasons given above with respect to Claim 13 (of which Claim 15 depends upon).

Therefore, the rejection of Claims 6, 15, 25 and 33 under 35 U.S.C. § 103 has been overcome.

C. The Examiner rejected Claim 8 under 35 U.S.C. § 103 as being unpatentable over Endicott, Howes, and de la Salle as applied to claim 1, in view of Wollrath et al. (U.S. 5,832,529) hereinafter referred to as Wollrath. This rejection is respectfully traversed for similar reasons to those given above with respect to Claim 1 (of which Claim 8 depends upon).

Therefore, the rejection of Claim 8 under 35 U.S.C. § 103 has been overcome.

D. The Examiner rejected Claims 18, 36 and 40 under 35 U.S.C. § 103 as being unpatentable over Endicott, Howes, and de la Salle in view of Geise et al. (5,247,520) hereinafter referred to as Geise. This rejection is respectfully traversed.

With respect to Claim 18, Applicants have amended such claim to clearly distinguish the invention recited therein from the teachings of the cited references. As amended, Claim 18 recites that a connection object is received from a server (Specification page 12, lines 16-18), and a reference to such (received) connection object is added to both a weak hash map and a hash map. None of the cited references teach or otherwise such receipt of a communication object for which a reference is then added to two different hash maps – a weak hash map and a hash map.

Further with respect to Claim 18, the two hash tables described by Geise are not a hash map and a weak hash map, as claimed. Applicants have amended Claim 18 to further clarify this distinction.

Still further with respect to Claim 18, Applicants have amended such claim to include the claimed feature of "while maintaining the reference to the connection object in the weak hash map" to further clarify and distinguish the presently claimed invention from the teachings of the cited references. It is urged that none of the cited references teach or suggest this claimed feature, which advantageously allows for the connection, upon expiration of the timer, to either be re-used or re-claimed (Specification page 12, line 30 – page 13, line 7).

Applicants traverse the rejection of Claims 36 and 40 for similar reasons to those given above with respect to Claim 18.

Therefore, the rejection of Claims 18, 36 and 40 under 35 U.S.C. § 103 has been overcome.

E. The Examiner rejected Claims 19 and 37 under 35 U.S.C. § 103 as being unpatentable over Endicott, Howes, de la Salle and Geise as applied to claims 18 and 36 respectively above, further in view of Weinstein et al. (Google Groups comp.lang.java.databases) hereinafter referred to as Weinstein. This rejection is respectfully traversed.

With respect to Claim 19, Applicants initially traverse such rejection for similar reasons to those given above with respect to Claim 18 (of which Claim 19 depends upon).

Further, it is urged that the Examiner is using improper hindsight analysis in rejecting Claim 19. It is error to reconstruct the patentee's claimed invention from the prior art by using

the patentee's claims as a "blueprint". When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight obtained from the invention itself. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 227 USPQ 543 (Fed. Cir. 1985). Due to the large number of references being used in the rejection of Claim 19 – five (5) references – it is urged that the Examiner must be using patentee's claims as a blueprint to combine such large number of references. As the Federal Circuit outlines in *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004), in making the assessment of differences between the prior art and the claimed subject matter, section 103 specifically requires consideration of the claimed invention "as a whole". Inventions typically are new combinations of existing principles or features. *Env'l. Designs, Ltd. V. Union Oil Co.*, 713 F.2d 693, 698 (Fed. Cir. 1983) (noting that "virtually all [inventions] are combinations of old elements"). The "as a whole" instruction in title 35 prevents evaluation of the invention part by part. *Ruiz*, 357 F.3d at 1275. Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component. *Id.* This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. Further, this improper method would discount the value of combining various existing features or principles in a new way to achieve a new result – often the essence of invention. *Id.* Contrary to this reasoning, section 103 requires assessment of the invention as a whole. *Id.* This "as a whole" assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner. *Id.* In other words, section 103 requires some suggestion or motivation, before the invention itself, to make the new combination. *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, Federal Circuit, No. 04-1493, June 9, 2005. In 1983, the late Judge Howard Markey made the following observation in *W.L. Gore & Associates Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), which states the basic interest protected by this test—improper hindsight analysis of prior art:

To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

It is thus respectfully submitted that the Examiner is using improper hindsight analysis in the rejection of Claim 19, and thus this claim has been erroneously rejected.

Still further with respect to Claim 19, it is urged that none of the cited references teach or suggest the claimed step of "determining whether the connection object has been destroyed". In rejecting this aspect to Claim 19, the Examiner cites Endicott's teaching at col. 7, lines 47-52 and col. 14, lines 44-47 as teaching this claimed step. As described above, since Endicott does not teach connection objects at all (and as expressly acknowledged by the Examiner in rejecting Claim 1), it is urged that Endicott cannot teach any action pertaining to such (missing) connection object, including the specifically claimed step of determining whether such (missing) connection object has been destroyed. Therefore, a proper *prima facie* case of obviousness has not been established, and the burden has not shifted to Applicants to rebut such obviousness assertion.

Similarly, because Endicott does not teach connection objects, it is urged that Endicott does not teach the claimed step of removing the reference to the (missing) connection object from the weak hash map if the (missing) connection object has been destroyed.

Still further, it is urged that none of the cited references teach or suggest the claimed feature of "maintaining the reference to the connection object in the weak hash map if the connection object has not been destroyed to thereby allow use of such connection object by a subsequent communication process between the client and server without establishing a new connection between the client and server". In rejecting this aspect of Claim 19, the Examiner cites Weinstein at page 12 of 16 as teaching this claimed feature. It is urged that this passage makes no mention of any weak hash map, and thus it necessarily follows that this passage does not teach or otherwise suggest maintaining a reference to a connection object *in the weak hash map* if the connection object has not been destroyed. This further evidences that a proper *prima facie* showing of obviousness has not been established with respect to Claim 19.

Still further with respect to Claim 19, it is urged that the cited Weinstein reference is non-enabling. This is a print-out of various back-and-forth conversations between individuals, where one person makes an assertion and then others comment on and frequently dispute/deny such assertion (see, for example, bottom of page 11 of 16). Thus, these Weinstein assertions are not established or enabled as being true – and in fact are merely individual opinions.

Applicants traverse the rejection of Claim 37 for similar reasons to those given above with respect to Claim 19.

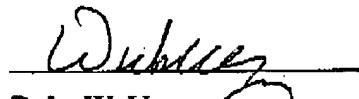
Therefore, the rejection of Claims 19 and 37 under 35 U.S.C. § 103 has been overcome.

III. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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